



Wastewater Study



July 16, 2019

To City of Scottsdale Water Resources Department

Copy to: Joe Phillips – City of Scottsdale, CPM

From Bill Roberts

Tel 602-216-7208

Subject Site 42 2.5 Million Gallon Reservoir Project
Final Basis for Design Report for Wastewater

Job no. 11180254

**FINAL Basis of Design
Report**

☐ APPROVED

☒ APPROVED AS NOTED

☐ REVISE AND RESUBMIT



Disclaimer: If approved, the approval is granted under the condition that the final construction documents submitted for city review will match the information herein. Any subsequent changes in the final construction documents that materially impact design criteria or standards will require re-analysis, re-submittal, and approval of a revised basis of design report prior to the plan review submission.; this approval is not a guarantee of construction document acceptance. For questions or clarifications contact the Water Resources Planning and Engineering Department at 480-312-5685.

BY rrahman

DATE 8/22/2019

1 Introduction

This memorandum will serve as the Final Basis for Design Report for Wastewater for the Site 42 Conditional Use Permit submittal. This memorandum summarizes the current wastewater system at the Site 42 facility. In addition, it describes the changes to the system that will be part of the new 2.5 million gallon (MG) reservoir project at the facility.

2 Project Background

Site 42 is a potable water facility that is owned and operated by the City of Scottsdale. The facility includes two potable water storage reservoirs and two booster pump stations (BPSs). It provides water service to the City's Northern Water Service Region. It also features water fill stations for private water sales.

The existing wastewater infrastructure at the facility is limited to the following items:

- A 2-inch diameter force main from the facility to the Pima Road Sewer that conveys flows from pumps in the following locations:
 - BPS 42 D&E electrical and disinfection building drain sump
 - BPS 42B air conditioning drain sump
- 2-inch sewer piping, septic tank, and leach field that served an existing fire station trailer that is no longer in use.

3 Proposed Improvements

The installation of the proposed 2.5 MG reservoir will require the removal of the existing septic tank and leach field. The fire station trailer will be demolished as part of this project or used by Water Operations staff in the future.

The existing water fill stations are located to the east of the facility along its driveway. Water truck drivers often spill water during their filling activities. A valley gutter will be installed along the fill stations to collect this nuisance water and convey it to a catch basin with a sediment sump. The catch basin will drain to a small packaged sump pump system. The sump pump system will include 4-14 gpm grinder pumps. Two of these pumps will be active and two will be back up units. Active and back up units with alternate daily. The 28 gpm capacity can accommodate up to twenty-nine trucks spilling up to 100 gallons each on a daily basis. The sump pump system will discharge through a 1.5-inch force main to the existing Pima Road sewer. A second 1.5-inch force main will be installed along the same alignment. It will serve as a redundant discharge for the sump pump system and could also be used by a second future packaged pump system that would be installed near the existing fire station trailer if it is repurposed in the future.

Shall be 2" force main per
discussion with the City